

**Draft report for the 13th meeting of the informal group on
“Behaviour of M2 & M3 general construction in case of Fire Event (BMFE)”**
(<https://wiki.unece.org/display/trans/GRSG-BMFE-13>)

Date: **2021, March 3rd** **10:00 – 12:00 (CET)**
14:00 – 16:00 (CET)

Venue: **Teams meeting**

1. Welcome and Roll call

[Fabrice Herveleu welcomes everybody](#)

2. Adoption of the agenda (*BMFE-13-01*)

[Agenda adopted but R118 Smoke toxicity reported to the next session](#)

3. Validation of the minutes of the last meeting (*BMFE-12-06*)

[No remarks, minutes adopted](#)

4. Regulation No.107 – Glass breaking device : efficiency ways of improvement

4.1. Test report glass breaking device for discussion (*BMFE-13-02*)[**CLCCR(VDL)-Group**]

[The VDL test was made by the testing department because the device was asked by customers. It is a common process to test it themselves because of the glass breaking principle. The test report shows a increased force on the device. In the different cases the glass didn't break easily, so the conclusion is that this device isn't sufficient in breaking the glass effectively, so no improvement of the evacuation time is noted, it can even lead to dangerous situations were safety is not improved...](#)

[In the group it was discussed that more investigation would be needed and that technology neutrality must be strived for, this presentation illustrated one specific application case. What do we do with the manufacturers that have patented devices, competitiveness in the market? Another remark was the fixed devices have no possibility in removing remaining glass in the frame of the opening. We also don't know which parts of the systems known \(Aguila system and SafeT Punch\) are patented?](#)

[For the next meeting CLCCR will prepare a document with status for possible benchmark.](#)

4.2. Review of the current draft proposal [**FR/GER**]

4.2.1. Last proposed amendments (*BMFE-13-03*) [**FR/GER**]

[A question was asked in the group about the text that says that a single positive action should make it possible to activate the device, so what can we do against unintended use?](#)

[For the life hammer it can be 'locked' in a box, signalling the driver when the hammer is removed from its holder \(microswitch that detects the hammer\), these systems exist already. Another solution could be a steel wire fixed to the hammer just long enough to be able to use it. It was suggested to put some protective cover over the device to avoid misuse, but then it is not a single positive action anymore... only for devices where you release stored energy to avoid unintended use.](#)

The word ‘permanently’ was considered to be the best wording.

4.2.2. Exchange of views on the positioning wording proposed **[Group]**

The upper third of the window is questioned, what do you do in case of luggage racks?

4.2.3. Exchange of views on the identification/marketing specification **[Group]**

Photoluminescence is difficult to achieve on the device on its own, better is a dedicated label, safety sign... that shows what to do in case of emergency.

France and Germany to change proposal for next BMFE session and to check possible link with R43.

4.3. Glass ejection facilitation

4.3.1. Coupling glass – plastic film validation in local application (*BMFE-13-04*)**[GER]**

Buses in Germany were tested in 2012 with a film on the inside and the outside. The film is not accepted because R43 is not fulfilled. It is a national solution. 4 test were done.

1. Without film
2. Outside boundaries cut
3. L + R side cut
4. No cuts

The inside is in fact an anti-scratch film.

In the videos we could see the different cases. These are national requirements, if the film + glass is tested, then it is OK, no buses without approval on the roads in Germany. A question was asked if the force to push the window out is not too high for children, but the experts in Germany were unanimous that it is ok for children to push it out. A national solution in Belgium also allows to cut the film in a pattern (*BMFE-13-05*). These are mainly for promotional stickers on vehicles. Test were done with a technical service in Belgium. The reason why it is cut in a pattern is because of the fact that in this case the window cannot fall on the head of a fireman when he is on the ground helping people.

Both in Belgium and Germany tests were only done on single paned windows. (Germany only 1 small double paned window, but it was difficult to break because it was so little).

If an aftermarket solution would be tested, then it needs to be fulfilling R43 according to Germany. The test of the combined material would then need to fulfil R43.

Conclusion on the topic according to the group: we need to specify something on glass ejection in R107 but with minimal references to another regulation, maybe only saying in R107 that it needs to be according R43 for the performance levels, as long as it leads to a quicker evacuation. The film should not be made mandatory.

4.3.2. Coupling glass – plastic film available products **[Volvo]**

Sancobel is a possible glass manufacturer. Problem is that the process to put the film on their production process is not that easy. The best is to add it at the final stage manufacturer. A recommendation from the glass manufacturer was that a device to break both panes is not likely to work always, so additionally the hammer would be best to keep.

Another position within the group was that more solutions should be developed for these types

of systems, but always with technology neutrality.

4.3.3. Other views to facilitate glass ejection **[Group]**

5. Regulation No.118 – Smoke toxicity : development of a simplified method for interior materials

5.1. Status of study progress **[BAM]** → Postponed

5.2. Material targeted and relevant results sharing **[BAM]** → Postponed

6. A.O.B & Next steps and meetings

Next BMFE session 25/03 at 13:00hrs till 16:00hrs